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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,961

01/26/2006

Neil B. McKeown

39-324

8444

23117

7590

03/19/2009

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EXAMINER

MENON, KRISHNAN S

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

03/19/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,961	<b>Applicant(s)</b> MCKEOWN ET AL.	
	<b>Examiner</b> Krishnan S. Menon	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 59-86 and 88-95 is/are pending in the application.
- 4a) Of the above claim(s) 73-82, 84, 86 and 89 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 65 and 90-92 is/are allowed.
- 6) ☒ Claim(s) 59-72, 83, 85 and 88 is/are rejected.
- 7) ☒ Claim(s) 89 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/9/09</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 59-86, 88 and 89-95 are pending as amended 2/9/09. Claims 59, 85, 88 are independent.

#### ***Double Patenting***

Claim 88 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 66. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

#### ***Claim Rejections - 35 USC § 102***

Claims 59-64, 66, 68, 70-72, 83, 85, 88 and 93-95 are rejected under 35 U.S.C. 102(a) as being anticipated by, or in the alternative, under 35 USC 103(a) as being obvious over by WO 03/000774, or alternately, McKeown (US 2004/0198587), its US equivalent (Used in the rejection).

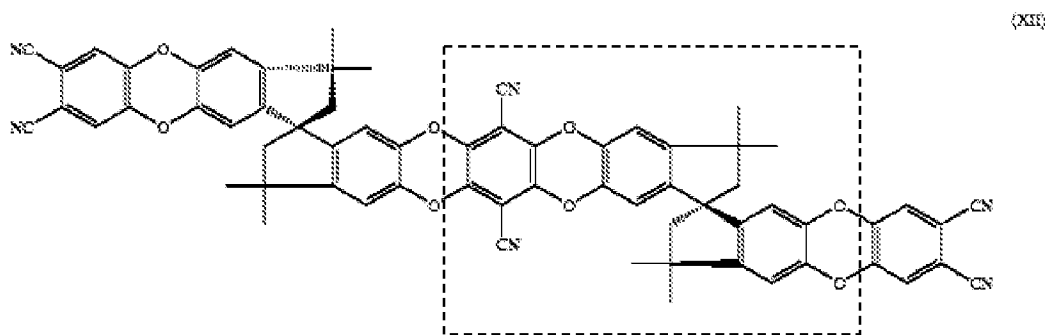
These claims recite a microporous macromolecular material having repeat units, all of which are either taught by, or made obvious by the McKeown reference. Specifics are as follows:

Claim 63 – corresponding formula in the reference is (IV).

Claim 64, 89: formula (IV) and (V) form the repeat unit; also IIb,

Claim 66, 88: see formula XII.

For example, see portion of the formula XII shown in the dotted box is what appears in claim 66 and 88. It is understood that the formula XII is a repeat unit. However, within formula XII is the formula of 66, which also becomes a repeat unit with formula XII.



Claims 67 and 69: the reference teaches such macromolecules, or at least reactions steps that lead to such macromolecules – see for example, formula IIb, IV and V, where L2 can be formula V, and the formula IIb represents a macromolecule of the repeat unit recited. Even if the macromolecules are considered to have porphyrinic links, the resulting macromolecule can be expected to have >90% by mole of the repeating units recited – the reference appears to teach large chains attached to a porphyrinic molecule. In addition, the molecular mass of the porphyrinic molecule being so high, its contribution to the mole ratio in the resulting macromolecule network would be very low.

Claims 70-72 recite inherent material properties.

Claim 83: molecular sensor is only an intended use of the material, since the claim does not recite any specific structure attributable to the molecular sensor.

The newly added limitation, “**non-network polymer**”, (by amendment of 2/9/09) would not make the claims patentable. The “network polymer” is defined only by the porphyrin based structures in applicant’s specification (page 5). Otherwise, polymers which have branched chains, or formed by monomers having more than two reacting moieties would inherently form network polymers (they are cross-linked). Honoring applicant’s definition of the term “network polymer” as constituting porphyrin based network, all structures having porphyrin can be considered as not anticipating the claims. However, the claims are still obvious to one of ordinary skill in the art, since the polymer monomers are capable of polymerizing without having the porphyrin linkage. In addition, the reference does teach non-porphyrin based linkages as well - see paragraphs 0033, 0050, etc., and thus still anticipate the claims.

Also as discussed above with claims 67 and 69, the polymer taught in the reference without having the porphyrin links also would form polymers, and thus makes the claims obvious.

### ***Allowable Subject Matter***

Claims 65 and 90-92 are allowed.

Claim 89 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments filed 2/9/09 have been fully considered but they are not persuasive.

The double-patenting rejection will be sustained until applicant makes corrective action.

The argument regarding the "non-network" polymer is not persuasive, response is provided in the rejection. The argument that microporous polymers are all network polymers is also not persuasive: there are plenty of polymers that form microporous structures, and which are not network polymers or cross-linked, such as PVdF, PTFE, polyolefins, etc., to name a few. These are well known in the art.

Other arguments are not commensurate in scope with the claims, and include limitations not encompassed in the claims.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on 571-272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Krishnan S Menon/  
Primary Examiner, Art Unit 1797